



# Managing User Accounts

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## Configuring Local Users

### Before you begin

You must log in as a user with admin privileges to configure or modify local user accounts.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope user</b> <i>usernumber</i>	Enters user command mode for user number <i>usernumber</i> .
<b>Step 2</b>	Server /user # <b>set enabled</b> { <b>yes</b>   <b>no</b> }	Enables or disables the user account on the Cisco IMC.
<b>Step 3</b>	Server /user # <b>set name</b> <i>username</i>	Specifies the username for the user.

	Command or Action	Purpose
<b>Step 4</b>	Server /user # <b>set password</b>	<p>You are prompted to enter the password twice.</p> <p><b>Note</b> When strong password is enabled, you must follow these guidelines while setting a password:</p> <ul style="list-style-type: none"> <li>• The password must have a minimum of 8 and a maximum of 14 characters.</li> <li>• The password must not contain the User's Name.</li> <li>• The password must contain characters from three of the following four categories: <ul style="list-style-type: none"> <li>• English uppercase characters (A through Z)</li> <li>• English lowercase characters (a through z)</li> <li>• Base 10 digits (0 through 9)</li> <li>• Non-alphabetic characters (!, @, #, \$, %, ^, &amp;, *, -, _, +, =)</li> </ul> </li> </ul> <p>when strong password is disabled, you can set a password using characters of your choice (alphanumeric, special characters, or integers) within the range 1-20.</p>
<b>Step 5</b>	Server /user # <b>set role {readonly   user   admin}</b>	<p>Specifies the role assigned to the user. The roles are as follows:</p> <ul style="list-style-type: none"> <li>• <b>readonly</b>—This user can view information but cannot make any changes.</li> <li>• <b>user</b>—This user can do the following: <ul style="list-style-type: none"> <li>• View all information</li> <li>• Manage the power control options such as power on, power cycle, and power off</li> <li>• Launch the KVM console and virtual media</li> <li>• Clear all logs</li> </ul> </li> </ul>

	Command or Action	Purpose
		<ul style="list-style-type: none"> <li>• Toggle the locator LED</li> <li>• Set the time zone</li> <li>• Ping an IP address</li> <li>• admin—This user can perform all actions available through the GUI, CLI, and IPMI.</li> </ul>
<b>Step 6</b>	Server /user # <b>commit</b>	Commits the transaction to the system configuration.

**Example**

This example configures user 5 as an admin:

```
Server# scope user 5
Server /user # set enabled yes
Server /user *# set name john
Server /user *# set password
Warning:
Strong Password Policy is enabled!
```

```
For CIMC protection your password must meet the following requirements:
    The password must have a minimum of 8 and a maximum of 14 characters.
    The password must not contain the User's Name.
    The password must contain characters from three of the following four categories.
        English uppercase characters (A through Z)
        English lowercase characters (a through z)
        Base 10 digits (0 through 9)
```

```
Please enter password:
Please confirm password:
Server /user *# set role readonly
Server /user *# commit
Server /user # show
User  Name          Role      Enabled
-----
5     john             readonly yes
```

## Non-IPMI User Mode

Release 4.1 introduces a new user configuration option called **User Mode** that allows you to switch between IPMI and non-IPMI user modes. Introduction of the non-IPMI user mode provides enhanced password security for users and security enhancements to the BMC database that were restricted in earlier releases due to the constraints posed by the IPMI 2.0 standards. Non-IPMI user mode allows you to use 127 characters to set user passwords whereas users in IPMI mode are restricted to a password length of 20 characters. Non-IPMI user mode enables you to set stronger passwords for users configured in this mode.

You must consider the following configuration changes that occur while switching between user modes, when you:

- Switch to the non-IPMI mode, IPMI over LAN will not be supported.

- Switch from the non-IPMI to IPMI mode, deletes all the local users and reverts user credentials to default username and password. On subsequent login, you will be prompted to change the password.

User data is not affected when you switch from IPMI to non-IPMI mode.

- Downgrade the firmware to a versions lower than 4.1 and if the user mode is non-IPMI, deletes all the local users and reverts user credentials to default username and password. On subsequent login, you will be prompted to change the default password.



**Note** When you reset to factory defaults, the user mode reverts to IPMI mode.

## Switching User Mode from IPMI to Non-IPMI

### Before you begin

You must log in as a user with admin privileges to perform this action.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope user-policy</b>	Enters user policy command mode.
<b>Step 2</b>	Server /user-policy # <b>scope user-mode</b>	Enters user mode command mode.
<b>Step 3</b>	Server /user-policy/user-mode # <b>set user-mode non-ipmi</b>	Enter y at the confirmation prompt to switch to Non-IPMI user mode.
<b>Step 4</b>	Server /user-policy/user-mode * # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /user-policy/user-mode # <b>show detail</b>	Displays the user mode.

### Example

This example shows how to disable strong password:

```
Server# scope user-policy
Server /user-policy # scope user-mode
Server /user-policy/user-mode # set user-mode non-ipmi
Server /user-policy/user-mode *# commit
Warning: This will enable NON-IPMI based user mode.
        Converting to Non-IPMI User Mode disables IPMI Services and removes IPMI user
support.
        SSH, KVM, Webserver, XMAPi and Redfish sessions will be disconnected.
Do you wish to continue? [y/N] y
Connection to 10.10.10.10 closed by remote host.
Connection to 10.10.10.10 closed.
Server /user-policy/user-mode # show detail
User Mode:
        User mode for IPMI accessibility: non-ipmi
Server /user-policy/user-mode #
```

## Switching User Mode from Non-IPMI to IPMI

### Before you begin

You must log in as a user with admin privileges to perform this action.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope user-policy</b>	Enters user policy command mode.
<b>Step 2</b>	Server /user-policy # <b>scope user-mode</b>	Enters user mode command mode.
<b>Step 3</b>	Server /user-policy/user-mode # <b>set user-mode ipmi</b>	Enter y at the confirmation prompt to switch to IPMI user mode.  <b>Note</b> Switching to IPMI user mode deletes all the UCS users and reverts to default username and password.
<b>Step 4</b>	Server /user-policy/user-mode * # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /user-policy/user-mode # <b>show detail</b>	Displays the user mode.

### Example

This example shows how to disable strong password:

```
Server# scope user-policy
Server /user-policy # scope user-mode
Server /user-policy/user-mode # set user-mode ipmi
Server /user-policy/user-mode * # commit
Warning: This will enable IPMI based user mode.
        Converting to IPMI User Mode deletes all UCS users and reverts to default
userid/password.
        SSH, KVM, Webserver, XMAPi and Redfish sessions will be disconnected.
Do you wish to continue? [y/N] y
Connection to 10.10.10.10 closed by remote host.
Connection to 10.10.10.10 closed.
Server /user-policy/user-mode # show detail
User Mode:
        User mode for IPMI accessibility: ipmi
Server /user-policy/user-mode #
```

## Disabling Strong Password

The Cisco IMC now implements a strong password policy wherein you are required to follow guidelines and set a strong password when you first log on to the server for the first time. The Cisco IMC CLI provides you option which allows you to disable the strong password policy and set a password of your choice by ignoring

the guidelines. Once you disable the strong password, an Enable Strong Password button is displayed. By default, the strong password policy is enabled.

### Before you begin

You must log in as a user with admin privileges to perform this action.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope user-policy</b>	Enters user policy command mode.
<b>Step 2</b>	Server /user-policy # <b>set password-policy</b> { <b>enabled</b>   <b>disabled</b> }	At the confirmation prompt, enter <b>y</b> to complete the action or <b>n</b> to cancel the action. Enables or disables the strong password.
<b>Step 3</b>	Server /user-policy # <b>commit</b>	Commits the transaction to the system configuration.

### Example

This example shows how to disable strong password:

```
Server# scope user-policy
Server /user-policy # set password-policy disabled
Warning: Strong password policy is being disabled.
Do you wish to continue? [y/N] y
Server /user-policy *# commit
Server /user-policy #
```

## Password Expiry

You can set a shelf life for a password, after which it expires. As an administrator, you can set this time in days. This configuration would be common to all users. Upon password expiry, the user is notified on login and would not be allowed to login unless the password is reset.



**Note** When you downgrade to an older database, existing users are deleted. The database returns to default settings. Previously configured users are cleared and the database is empty, that is, the database has the default username - 'admin' and password - 'password'. Since the server is left with the default user database, the change default credential feature is enabled. This means that when the 'admin' user logs on to the database for the first time after a downgrade, the user must mandatorily change the default credential.

### Password Set Time

A 'Password set time' is configured for every existing user, to the time when the migration or upgrade occurred. For new users (users created after an upgrade), the Password Set time is configured to the time when the user was created, and the password is set. For users in general (new and existing), the Password Set Time is updated whenever the password is changed.

# Resetting the User Password

You can use the change password option to change your password.



## Note

- This option is not available when you login as an admin, you can only change the password of the configured users with read-only user privileges.
- When you change your password you will be logged out of Cisco IMC.

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope user</b> <i>user ID</i>	Enters the chosen user command mode.
<b>Step 2</b>	Server /chassis/user # <b>set password</b>	Read the password requirements instructions and enter the current password, new password and confirm the password at the respective prompts.
<b>Step 3</b>	Server /chassis/user * # <b>commit</b>	Commits the transaction to the system configuration.

## Example

This example shows how to change the password of a configured user:

```
Server # scope user 2
Server /chassis/user # set password
Warning:
Strong Password Policy is enabled!
For CIMC protection your password must meet the following requirements:
  The password must have a minimum of 8 and a maximum of 20 characters.
  The password must not contain the User's Name.
  The password must contain characters from three of the following four categories.
    English uppercase characters (A through Z)
    English lowercase characters (a through z)
    Base 10 digits (0 through 9)
    Non-alphabetic characters (!, @, #, $, %, ^, &, *, -, _, +, =)
Please enter current password: Testabcd1
Please enter password: Testabcd2
Please confirm password: Testabcd2
Server /chassis/user * # commit
Server /chassis/user #
```

# Configuring Password Expiry for Users

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope user-policy</b>	Enters the user policy command mode.
<b>Step 2</b>	Server /user-policy # <b>scope password-expiration</b>	Enters the password expiration command mode.
<b>Step 3</b>	Server /user-policy/password-expiration # <b>set password-expiry-duration</b> <i>integer in the range 0-3650</i>	The time period that you can set for the existing password to expire (from the time you set a new password or modify an existing one). The range is between 0 to 3650 days. Entering 0 disables this option.
<b>Step 4</b>	Server /user-policy/password-expiration * # <b>set notification-period</b> <i>integer in the range 0-15</i>	Notifies the time by when the password expires. Enter a value between 0 to 15 days. Entering 0 disables this option.
<b>Step 5</b>	Server /user-policy/password-expiration * # <b>set grace-period</b> <i>integer in the range 0-5</i>	Time period till when the existing password can still be used, after it expires. Enter a value between 0 to 5 days. Entering 0 disables this option.
<b>Step 6</b>	Server /user-policy/password-expiration * # <b>set password-history</b> <i>integer in the range 0-5</i>	The number of occurrences when a password was entered. When this is enabled, you cannot repeat a password. Enter a value between 0 to 5. Entering 0 disables this option.
<b>Step 7</b>	Server /user-policy/password-expiration * # <b>commit</b>	Commits the transactions.
<b>Step 8</b>	(Optional) Server /user-policy/password-expiration # <b>show detail</b>	Shows the password expiration details.
<b>Step 9</b>	(Optional) Server /user-policy/password-expiration # <b>restore</b>	At the confirmation prompt, enter <b>yes</b> to restore the password expiry settings to default values.

## Example

This example sets the password expiration and restore the settings to default vales:

```
Server # scope user-policy
Server /user-policy # scope password-expiration
Server /user-policy/password-expiration # set password-expiry-duration 5
Server /user-policy/password-expiration * # set notification-period 2
Server /user-policy/password-expiration * # set grace-period 1
Server /user-policy/password-expiration * # set password-history 4
Server /user-policy/password-expiration * # commit
Server /user-policy/password-expiration # show detail
```

```
Password expiration parameters:
Valid password duration: 5
Number of stored old passwords: 4
Notification period: 2
Grace period: 1
Server /user-policy/password-expiration #
Restoring the password expiry parameters to default values:
Server /user-policy/password-expiration # restoreAre you sure you want to restore
User password expiration parameters to defaults?
Please enter 'yes' to confirm:yes
Server /user-policy/password-expiration #
```

## LDAP Servers

Cisco IMC supports directory services that organize information in a directory, and manage access to this information. Cisco IMC supports Lightweight Directory Access Protocol (LDAP), which stores and maintains directory information in a network. In addition, Cisco IMC supports Microsoft Active Directory (AD). Active Directory is a technology that provides a variety of network services including LDAP-like directory services, Kerberos-based authentication, and DNS-based naming. The Cisco IMC utilizes the Kerberos-based authentication service of LDAP.

When LDAP is enabled in the Cisco IMC, user authentication and role authorization is performed by the LDAP server for user accounts not found in the local user database. The LDAP user authentication format is `username@domain.com`.

By enabling encryption in the configuration of Active Directory on the server, you can require the server to encrypt data sent to the LDAP server.

## Configuring the LDAP Server

The Cisco IMC can be configured to use LDAP for user authentication and authorization. To use LDAP, configure users with an attribute that holds the user role and locale information for the Cisco IMC. You can use an existing LDAP attribute that is mapped to the Cisco IMC user roles and locales or you can modify the LDAP schema to add a new custom attribute, such as the `CiscoAVPair` attribute, which has an attribute ID of 1.3.6.1.4.1.9.287247.1.



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**Important**

For more information about altering the schema, see the article at <http://technet.microsoft.com/en-us/library/bb727064.aspx>.



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**Note**

This example creates a custom attribute named `CiscoAVPair`, but you can also use an existing LDAP attribute that is mapped to the Cisco IMC user roles and locales.

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If you are using Group Authorization on the Cisco IMC LDAP configuration, then you can skip Steps 1-4 and perform the steps listed in the *Configuring LDAP Settings and Group Authorization in Cisco IMC* section.

The following steps must be performed on the LDAP server.

## Procedure

**Step 1** Ensure that the LDAP schema snap-in is installed.

**Step 2** Using the schema snap-in, add a new attribute with the following properties:

Properties	Value
Common Name	CiscoAVPair
LDAP Display Name	CiscoAVPair
Unique X500 Object ID	1.3.6.1.4.1.9.287247.1
Description	CiscoAVPair
Syntax	Case Sensitive String

**Step 3** Add the CiscoAVPair attribute to the user class using the snap-in:

- Expand the **Classes** node in the left pane and type **U** to select the user class.
- Click the **Attributes** tab and click **Add**.
- Type **C** to select the CiscoAVPair attribute.
- Click **OK**.

**Step 4** Add the following user role values to the CiscoAVPair attribute, for the users that you want to have access to Cisco IMC:

Role	CiscoAVPair Attribute Value
admin	shell:roles="admin"
user	shell:roles="user"
read-only	shell:roles="read-only"

**Note** For more information about adding values to attributes, see the article at <http://technet.microsoft.com/en-us/library/bb727064.aspx>.

## What to do next

Use the Cisco IMC to configure the LDAP server.

# Configuring LDAP in Cisco IMC

Configure LDAP in Cisco IMC when you want to use an LDAP server for local user authentication and authorization.

**Before you begin**

You must log in as a user with admin privileges to perform this task.

**Procedure**

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the LDAP command mode.
<b>Step 2</b>	Server /ldap # <b>set enabled</b> {yes   no}	Enables or disables LDAP security. When enabled, user authentication and role authorization is performed by LDAP for user accounts not found in the local user database.
<b>Step 3</b>	Server /ldap # <b>set domainLDAP</b> <i>domain name</i>	Specifies an LDAP domain name.
<b>Step 4</b>	Server /ldap # <b>set timeout</b> <i>seconds</i>	Specifies the number of seconds the Cisco IMC waits until the LDAP search operation times out. The value must be between 0 and 1800 seconds.
<b>Step 5</b>	Server /ldap # <b>set encrypted</b> {yes   no}	If encryption is enabled, the server encrypts all information sent to AD.
<b>Step 6</b>	Server /ldap # <b>set base-dn</b> <i>domain-name</i>	Specifies the Base DN that is searched on the LDAP server.
<b>Step 7</b>	Server /ldap # <b>set attribute</b> <i>name</i>	<p>Specify an LDAP attribute that contains the role and locale information for the user. This property is always a name-value pair. The system queries the user record for the value that matches this attribute name.</p> <p>You can use an existing LDAP attribute that is mapped to the Cisco IMC user roles and locales or you can create a custom attribute, such as the CiscoAVPair attribute, which has the following attribute ID:</p> <p>1.3.6.1.4.1.9.287247.1</p> <p><b>Note</b> If you do not specify this property, user access is denied.</p>
<b>Step 8</b>	Server /ldap # <b>set filter-attribute</b>	Specifies the account name attribute. If Active Directory is used, then specify <b>sAMAccountName</b> for this field.
<b>Step 9</b>	Server /ldap # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 10</b>	Server /ldap # <b>show</b> [detail]	(Optional) Displays the LDAP configuration.

### Example

This example configures LDAP using the CiscoAVPair attribute:

```

Server# scope ldap
Server /ldap # set enabled yes
Server /ldap *# set domain sample-domain
Server /ldap *# set timeout 60
Server /ldap *# set encrypted yes
Server /ldap *# set base-dn example.com
Server /ldap *# set attribute CiscoAVPair
Server /ldap *# set filter-attribute sAMAccountName
Server /ldap *# commit
Server /ldap # show detail
LDAP Settings:
  Enabled: yes
  Encrypted: yes
  Domain: sample-domain
  BaseDN: example.com
  Timeout: 60
  Filter-Attribute: sAMAccountName
  Attribute: CiscoAvPair
Server /ldap #

```

### What to do next

If you want to use LDAP groups for group authorization, see *Configuring LDAP Groups in Cisco IMC*.

## Configuring LDAP Groups in Cisco IMC



### Note

When Active Directory (AD) group authorization is enabled and configured, user authentication is also done on the group level for users that are not found in the local user database or who are not individually authorized to use Cisco IMC in the Active Directory.

### Before you begin

- You must log in as a user with admin privileges to perform this task.
- Active Directory (or LDAP) must be enabled and configured.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the LDAP command mode for AD configuration.
<b>Step 2</b>	Server /ldap# <b>scope ldap-group-rule</b>	Enters the LDAP group rules command mode for AD configuration.

	Command or Action	Purpose
<b>Step 3</b>	Server /ldap/ldap-group-rule # <b>set group-auth</b> {yes   no}	Enables or disables LDAP group authorization.
<b>Step 4</b>	Server /ldap # <b>scope role-group</b> <i>index</i>	Selects one of the available group profiles for configuration, where <i>index</i> is a number between 1 and 28.
<b>Step 5</b>	Server /ldap/role-group # <b>set name</b> <i>group-name</i>	Specifies the name of the group in the AD database that is authorized to access the server.
<b>Step 6</b>	Server /ldap/role-group # <b>set domain</b> <i>domain-name</i>	Specifies the AD domain the group must reside in.
<b>Step 7</b>	Server /ldap/role-group # <b>set role</b> {admin   user   readonly}	Specifies the permission level (role) assigned to all users in this AD group. This can be one of the following: <ul style="list-style-type: none"> <li>• <b>admin</b>—The user can perform all actions available.</li> <li>• <b>user</b>—The user can perform the following tasks: <ul style="list-style-type: none"> <li>• View all information</li> <li>• Manage the power control options such as power on, power cycle, and power off</li> <li>• Launch the KVM console and virtual media</li> <li>• Clear all logs</li> <li>• Toggle the locator LED</li> </ul> </li> <li>• <b>readonly</b>—The user can view information but cannot make any changes.</li> </ul>
<b>Step 8</b>	Server /ldap/role-group # <b>commit</b>	Commits the transaction to the system configuration.

### Example

This example shows how to configure LDAP group authorization:

```
Server# scope ldap
Server /ldap # scope ldap-group-rule
Server /ldap/ldap-group-rule # set group-auth yes
Server /ldap *# scope role-group 5
Server /ldap/role-group # set name Training
Server /ldap/role-group* # set domain example.com
Server /ldap/role-group* # set role readonly
Server /ldap/role-group* # commit
```

```
ucs-c250-M2 /ldap # show role-group
Group  Group Name      Domain Name      Assigned Role
-----
1      (n/a)              (n/a)           admin
2      (n/a)              (n/a)           user
3      (n/a)              (n/a)           readonly
4      (n/a)              (n/a)           (n/a)
5      Training           example.com     readonly

Server /ldap/role-group #
```

## Configuring Nested Group Search Depth in LDAP Groups

You can search for an LDAP group nested within another defined group in an LDAP group map.

- You must log in as a user with admin privileges to perform this task.
- Active Directory (or LDAP) must be enabled and configured.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the LDAP command mode for AD configuration.
<b>Step 2</b>	Server /ldap# <b>scope ldap-group-rule</b>	Enters the LDAP group rules command mode for AD configuration.
<b>Step 3</b>	Server /ldap/ldap-group-rule # <b>set group-search-depth value</b>	Enables search for a nested LDAP group.
<b>Step 4</b>	Server /ldap/role-group-rule # <b>commit</b>	Commits the transaction to the system configuration.

### Example

This example shows how to search for run a search for an LDAP group nested within another defined group.

```
Server# scope ldap
Server /ldap # scope ldap-group-rule
Server /ldap/ldap-group-rule # set group-search-depth 10
Server /ldap/role-group-rule* # commit
Server /ldap/role-group-rule # show detail
Group rules for LDAP:
  Group search attribute: memberOf
  Enable Group Authorization: yes
  Nested group search depth: 10
Server/ldap/ldap-group-rule #
```

# LDAP Certificates Overview

Cisco S3260 C-series servers allow an LDAP client to validate a directory server certificate against an installed CA certificate or chained CA certificate during an LDAP binding step. This feature is introduced in the event where anyone can duplicate a directory server for user authentication and cause a security breach due to the inability to enter a trusted point or chained certificate into the Cisco IMC for remote user authentication.

An LDAP client needs a new configuration option to validate the directory server certificate during the encrypted TLS/SSL communication.

## Exporting LDAP CA Certificate

### Before you begin

You must log in as a user with admin privileges to perform this task.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the LDAP command mode.
<b>Step 2</b>	Server# /ldap <b>scope binding-certificate</b>	Enters the LDAP CA certificate binding command mode.
<b>Step 3</b>	Server /ldap/binding-certificate # <b>export-ca-certificate</b> <i>remote-protocol IP Address LDAP CA Certificate file</i>	Specifies the protocol to connect to the remote server. It can be of the following types: <ul style="list-style-type: none"> <li>• TFTP</li> <li>• FTP</li> <li>• SFTP</li> <li>• SCP</li> <li>• HTTP</li> </ul>

	Command or Action	Purpose
		<p><b>Note</b> The Cisco UCS C-Series server now supports fingerprint confirmation of the server when you update firmware through a remote server. This option is available only if you choose SCP or SFTP as the remote server type.</p> <p>If you chose SCP or SFTP as the remote server type while performing this action, a prompt with the message Server (RSA) key fingerprint is &lt;server_finger_print_ID&gt; Do you wish to continue? Click y or n depending on the authenticity of the server fingerprint.</p> <p>The fingerprint is based on the host's public key and helps you to identify or verify the host you are connecting to.</p> <p>Initiates the export of the certificate.</p>

### Example

This example exports the LDAP certificate:

```
Server # scope ldap
Server /ldap # scope binding-certificate
Server /ldap/binding-certificate # export-ca-certificate tftp 172.22.141.66 test.csv
Initiating Export
  % Total      % Received % Xferd  Average Speed   Time    Time       Time  Current
   Dload  Upload   Total             Spent    Left     Speed
 100 1262    0    0 100 1262      0   1244  0:00:01  0:00:01 --:--:-- 1653
 100 1262    0    0 100 1262      0   1237  0:00:01  0:00:01 --:--:-- 1237
LDAP CA Certificate is exported successfully
Server /ldap/binding-certificate #
```

## Downloading LDAP CA Certificate Content by Copying Content

### Before you begin

You must log in as a user with admin privileges to perform this task.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# scope ldap	Enters the LDAP command mode.

	Command or Action	Purpose
<b>Step 2</b>	Server# /ldap <b>scope binding-certificate</b>	Enters the LDAP CA certificate binding command mode.
<b>Step 3</b>	Server# /ldap/binding-certificate <b>set enabled</b> {yes   no}	Enables or disables LDAP CA certificate binding.
<b>Step 4</b>	Server /ldap/binding-certificate* # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /ldap/binding-certificate # <b>paste-ca-certificate</b>	Prompts you to paste the certificate content.
<b>Step 6</b>	Paste the certificate content and press <b>CTRL+D</b> .	Confirmation prompt appears.
<b>Step 7</b>	At the confirmation prompt, enter <b>y</b> .	This begins the download of the LDAP CA certificate.

**Example**

This example downloads the LDAP certificate:

```

Server # scope ldap
Server /ldap # scope binding-certificate
Server /ldap/binding-certificate # set enabled yes
Server /ldap/binding-certificate *# commit
Server /ldap/binding-certificate # show detail
LDAP binding with Certificate:
    Enabled: yes
Server /ldap/binding-certificate # paste-ca-certificate
    Please paste your certificate here, when finished, press CTRL+D.
-----BEGIN CERTIFICATE-----
MIIDdzCCAl+gAwIBAgIQV06yJcJPAYNO8Cp+FYQttjANBgkqhkiG9w0BAQsFADBO
MRlWEAYKczImiZPyLQGBGRYCaW4xGzAZBgoJkiaJk/IsZAEZFgs0T0JKUkEySkhC
UTeBMBkGAlUEAxMSV01OLTRPQkpSQTKSEJRLUNBMB4XDTE2MDIyNTE3MDczNl0X
DTIwMDIyNTE3MTczMl0wTjESMBAGCgMSJomT8ixkARKWAmLuMRswGQYKczImiZPy
LQGBGRYLINE9CSlJBMkpIQlExGzAZBgNVBAMTEldJTl0T0JKUkEySkhCUS1DQTC
ASlWdQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAMM2cdgmrPTkZe4K2zI+EbeZ
mfQnjfiUz8OIY97w8lC/2S4qK46T+fnXl3rXe8vvVHA05wgPDVQTGS4nlF46A6Ba
FK+krKcIqFrQB1gnF74qs/ln1YtKHNbjrvG5KyeWFrA7So6Mi2XEw8w/zMPL0d8T
b+LM1YnhnuXA9G8gVCJ/iUhXfMpB20L8sv30Mek7bw8x2cxJYTuJAViViRjSwU5j
fO3WKttRuyFpeOIi00weklpF0+8D3Z9mBinoTbL2pl0U32am6wTI+8WmtJ+8W68v
jH4Y8YBY/kzMHdpwjdZkC5pE9Bcm0rL9xKoIu6X0kSNEssoGnepFyNaH3t8vnMC
AwEAAANRME8wCwYDVR0PBAQDAGGMA8GA1UdEwEB/wQFMAMBAf8wHQYDVR0OBBYE
FBAUulHTAWBT1OBz8IqAEzXsfCcSMBAGCSsGAQQBggjcvAQQQDAGEAMA0GCSqGSIb3
DQEBcwUAA4IBAQAzumZr+0rldWkVfFNbd7lu8tQbAEJf/A7PIKnJGNoUq8moAGS4
pMndoxdpNGZhYCWDX3GWdeF1HqZHhb38gGQ9y1u0pIK7tgQufZmeCBH6T7Tzq/w
Dq+TMFGIjXF84xW3N665y4ePgUcUI7e/6aBGcGkGeUYodBPtExe28tQyeuYwD4Zj
nLuZKkT+I4PAYyVCqxDGsvfRHdpGneb3R+GeonOf4ED/0tn5PLSL9khh9qkHu/V
do3/HmKVzUhl0TDBuAMq/wES2WZAWHGr3hBc4nWQnjZWEMOKDpYZVK/GhBmNF+xi
eRcFqgh64oEmH9qAp0caGs1e7UyYaN+LtPRE
-----END CERTIFICATE-----
CTRL+D
    You are going to overwrite the LDAP CA Certificate.
    Are you sure you want to proceed and overwrite the LDAP CA Certificate? [y|N]
y
Server /ldap/binding-certificate #
    
```

## Downloading LDAP CA Certificate Using Remote Server

### Before you begin

You must log in as a user with admin privileges to perform this task.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the LDAP command mode.
<b>Step 2</b>	Server# /ldap <b>scope binding-certificate</b>	Enters the LDAP CA certificate binding command mode.
<b>Step 3</b>	Server# /ldap/binding-certificate <b>set enabled</b> {yes   no}	Enables or disables LDAP CA certificate binding.
<b>Step 4</b>	Server /ldap/binding-certificate* # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /ldap/binding-certificate # <b>download-ca-certificate remote-protocol IP</b> <i>Address LDAP CA Certificate file</i>	<p>Specifies the protocol to connect to the remote server. It can be of the following types:</p> <ul style="list-style-type: none"> <li>• TFTP</li> <li>• FTP</li> <li>• SFTP</li> <li>• SCP</li> <li>• HTTP</li> </ul> <p><b>Note</b> The Cisco UCS C-Series server now supports fingerprint confirmation of the server when you update firmware through a remote server. This option is available only if you choose SCP or SFTP as the remote server type.</p> <p>If you chose SCP or SFTP as the remote server type while performing this action, a prompt with the message Server (RSA) key fingerprint is &lt;server_finger_print_ID&gt; Do you wish to continue? Click y or n depending on the authenticity of the server fingerprint.</p> <p>The fingerprint is based on the host's public key and helps you to identify or verify the host you are connecting to.</p>

	Command or Action	Purpose
<b>Step 6</b>	At the confirmation prompt, enter <b>y</b> .	This begins the download of the LDAP CA certificate.

**Example**

This example downloads the LDAP certificate:

```

Server # scope ldap
Server /ldap # scope binding-certificate
Server /ldap/binding-certificate # set enabled yes
Server /ldap/binding-certificate *# commit
Server /ldap/binding-certificate # show detail
LDAP binding with Certificate:
    Enabled: yes
Server /ldap/binding-certificate # download-ca-certificate tftp 172.22.141.66
new_com_chain.cer
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 1282 100 1282    0     0  1247      0  0:00:01  0:00:01  ---:---: 1635
100 1282 100 1282    0     0  1239      0  0:00:01  0:00:01  ---:---: 1239
    You are going to overwrite the LDAP CA Certificate.
    Are you sure you want to proceed and overwrite the LDAP CA Certificate? [y|N]y
LDAP CA Certificate is downloaded successfully
Server /ldap/binding-certificate #
    
```

## Testing LDAP Binding

**Before you begin**

You must log in as a user with admin privileges to perform this task.



**Note** If you checked the **Enable Encryption** and the **Enable Binding CA Certificate** check boxes, enter the fully qualified domain name (FQDN) of the LDAP server in the LDAP Server field. To resolve the FQDN of the LDAP server, configure the preferred DNS of Cisco IMC network with the appropriate DNS IP address.

**Procedure**

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the LDAP command mode.
<b>Step 2</b>	Server# /ldap <b>scope binding-certificate</b>	Enters the LDAP CA certificate binding command mode.
<b>Step 3</b>	Server /ldap/binding-certificate # <b>test-ldap-binding username</b>	Password prompt appears.
<b>Step 4</b>	Enter the corresponding password.	Authenticates the user.

**Example**

This example tests the LDAP user binding:

```
Server # scope ldap
Server /ldap # scope binding-certificate
Server /ldap/binding-certificate # test-ldap-binding user
Password:
diagldapbinding: Authenticated by LDAP
User user authenticated successfully.
Server /ldap/binding-certificate #
```

## Deleting LDAP CA Certificate

**Before you begin**

You must log in as a user with admin privileges to perform this task.

**Procedure**

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the LDAP command mode.
<b>Step 2</b>	Server# /ldap <b>scope binding-certificate</b>	Enters the LDAP CA certificate binding command mode.
<b>Step 3</b>	Server /ldap/binding-certificate # <b>delete-ca-certificate</b>	Confirmation prompt appears.
<b>Step 4</b>	At the confirmation prompt, enter <b>y</b> .	This deletes the LDAP CA certificate.

**Example**

This example deletes the LDAP certificate:

```
Server # scope ldap
Server /ldap # scope binding-certificate
Server /ldap/binding-certificate # delete-ca-certificate
You are going to delete the LDAP CA Certificate.
Are you sure you want to proceed and delete the LDAP CA Certificate? [y|N]y
LDAP CA Certificate is deleted successfully
Server /ldap/binding-certificate #
```

# Setting User Search Precedence

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope ldap</b>	Enters the BIOS command mode.
<b>Step 2</b>	Server# /ldap <b>set userSearchPrecedence</b> { <i>localUserDB</i>   <i>ldapUserDB</i> }	Sets the user search precedence to the LDAP database or the local user database depending on the option you choose.
<b>Step 3</b>	Server# /ldap * <b>commit</b>	Commits the transaction.
<b>Step 4</b>	(Optional) Server# /ldap <b>show detail</b>	Shows the LDAP details.

## Example

This example sets the user search precedence:

```
Server # scope ldap
Server /ldap # set userSearchPrecedence localUserDB
Server /ldap * # commit
Server /ldap # show detail
LDAP Settings:
Enabled: yes
Encrypted: no
Local User Search Precedence: localUserDB
Domain: new.com
Base DN: DC=new,DC=com
Timeout: 60
Filter Attribute: sAMAccountName
Attribute: CiscoAvPair
Server /ldap #
```

# Viewing User Sessions

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>show user-session</b>	Displays information about current user sessions.

The command output displays the following information about current user sessions:

Name	Description
<b>Terminate Session</b> button	If your user account is assigned the <b>admin</b> user role, this option enables you to force the associated user session to end.  <b>Note</b> You cannot terminate your current session from this tab.
<b>Session ID</b> column	The unique identifier for the session.
<b>BMC Session ID</b>	The identifier for the BMC session.
<b>User Name</b> column	The username for the user.
<b>IP Address</b> column	The IP address from which the user accessed the server. If this is a serial connection, it displays <b>N/A</b> .
<b>Session Type</b> column	The type of session the user chose to access the server. This can be one of the following: <ul style="list-style-type: none"> <li>• <b>webgui</b>— indicates the user is connected to the server using the web UI.</li> <li>• <b>CLI</b>— indicates the user is connected to the server using CLI.</li> <li>• <b>serial</b>— indicates the user is connected to the server using the serial port.</li> </ul>

### Example

This example displays information about current user sessions:

```
Server# show user-session
ID      Name           IP Address      Type           Killable
-----
15      admin          10.20.30.138   CLI            yes
Server /user #
```

## Terminating a User Session

### Before you begin

You must log in as a user with admin privileges to terminate a user session.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>show user-session</b>	Displays information about current user sessions. The user session to be terminated must be eligible to be terminated (killable) and must not be your own session.

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 2</b>	Server /user-session # <b>scope user-session</b> <i>session-number</i>	Enters user session command mode for the numbered user session that you want to terminate.
<b>Step 3</b>	Server /user-session # <b>terminate</b>	Terminates the user session.

### Example

This example shows how the admin at user session 10 terminates user session 15:

```
Server# show user-session
ID      Name           IP Address      Type      Killable
-----
10      admin           10.20.41.234   CLI      yes
15      admin           10.20.30.138   CLI      yes
Server# scope user-session 15
Server /user-session # terminate
User session 15 terminated.

Server /user-session #
```

